CLAIMS

1. (Amended) A method for cutting brittle material by irradiating laser light from a laser light source onto a brittle material to generate thermal distortions over a wide range of the brittle material, providing cracks in the interior of the brittle material and moving that irradiating position along a predetermined line of the brittle material to cut the brittle material, the method comprising:

providing a plurality of optical fibers which guide laser lights from a plurality of laser light sources to the brittle material;

driving the plurality of laser light sources, with the plurality of optical fibers in a bundled condition such that irradiating spots of the lights irradiating the brittle material are arranged in a matrix arrangement, for irradiating a composite laser light which achieves a predetermined shape onto the surface of the brittle material; and

adjusting a light intensity distribution of this composite laser light by controlling respectively the light intensity of the plurality of the laser light sources.

2. (Amended) The method for cutting brittle material according to claim 1, wherein the shape of the composite laser light is set by selectively driving the plurality of laser light sources.

3. (Amended) The method for cutting brittle material according to claim 1, wherein the shape of the composite laser light is set by selecting a method for bundling the plurality of optical fibers.

4. (Amended) The method for cutting a brittle material according to claim 1, wherein the plurality of laser light sources are set to different

output intensities.

5. (Amended) The method for cutting a brittle material according to claim 1, wherein the shape of the composite laser light is set by controlling an emission start time of the plurality of light sources to a predetermined sequence of time differences.

6. (Amended) An apparatus for cutting brittle material by irradiating a brittle material with a laser light from a laser light source and moving that irradiating position along a predetermined line of the brittle material, comprising:

a plurality of laser light sources;

a plurality of optical fibers, bundled so as to guide the laser light from each laser light source to a surface of the brittle material, and arranged such that irradiating spots of the laser lights irradiating the brittle material are arranged in a matrix arrangement, and

a scanning means for moving a position at which the laser light is irradiated onto the brittle material,

wherein the composite laser light which has a predetermined shape is irradiated onto the surface of the brittle material with the plurality of bundled optical fibers, and the light intensity distribution of this composite laser light is adjusted by controlling respectively the light intensity of the plurality of laser light sources.

7. (Amended) The apparatus for cutting brittle material according to claim 6, further comprising:

a light intensity measuring means for measuring a light intensity distribution of the composite laser light on the irradiated surface of the brittle material.

8. (Amended) The apparatus for cutting brittle material according to claim 7, further comprising:

a transportation means for transporting the light intensity measuring means along the laser light irradiated surface of the brittle material.

9. (New) A method for cleaving brittle material wherein thermal distortions are generated over a wide range of the brittle material by irradiating laser light from a laser light source onto a brittle material, and a crack formed at a starting point of processing the brittle material is advanced by moving that irradiating position along a predetermined line of the brittle material to cleave the brittle material, the method comprising:

providing a plurality of optical fibers which guide laser lights from a plurality of laser light sources to the brittle material;

driving the plurality of laser light sources, with the plurality of optical fibers in a bundled condition such that irradiating spots of the laser lights irradiating the brittle material are arranged in a matrix arrangement, for irradiating a composite laser light which achieves a predetermined shape onto the surface of the brittle material; and

adjusting a light intensity distribution of this composite laser light by controlling respectively the light intensity of the plurality of the laser light sources.

10. (New) The method for cleaving brittle material according to claim 9, wherein the shape of the composite laser light is set by selectively driving the plurality of laser light sources.

11. (New) The method for cleaving brittle material according to claim 9, wherein the shape of the composite laser light is set by selecting a method for bundling the plurality of optical fibers.

12. (New) The method for cleaving brittle material according to claim 9, wherein the plurality of laser light sources are set to different output intensities.

13. (New) The method for cleaving brittle material according to claim 9, wherein the shape of the composite laser light is set by controlling an emission start time of the plurality of light sources to a predetermined sequence of time differences.

14. (New) An apparatus for cleaving brittle material by irradiating the brittle material with a laser light from a laser light source and moving that irradiating position along a predetermined line of the brittle material, comprising:

a plurality of laser light sources;

a plurality of optical fibers, bundled so as to guide the laser light from each laser light source to a surface of the brittle material, and arranged such that irradiating spots of the laser lights irradiating the brittle material are arranged in a matrix arrangement, and

a scanning means for moving a position at which the laser light is irradiated onto the brittle material,

wherein the composite laser light which has a predetermined shape is irradiated onto the surface of the brittle material with the plurality of bundled optical fibers, and the light intensity distribution of this composite laser light is adjusted by controlling respectively the light intensity of the plurality of laser light sources.

15. (New) The apparatus for cleaving brittle material according to claim 14, further comprising:

a light intensity measuring means for measuring a light intensity

distribution of the composite laser light on the irradiated surface of the brittle material.

16. (New) The apparatus for cleaving brittle material according to claim 15, further comprising:

a transportation means for transporting the light intensity measuring means along the laser light irradiated surface of the brittle material.